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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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09/823,399

03/30/2001

Xin Li

8371-124

8768

20575

7590

08/02/2004

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EXAMINER

COUSO, YON JUNG

ART UNIT

PAPER NUMBER

2625

DATE MAILED: 08/02/2004

8

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/823,399

Applicant(s)

LI, XIN

Examiner

Yon Couso

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01 June 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 8 and 9 is/are rejected.
- 7) ☒ Claim(s) 5-7 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 01 June 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Applicant's arguments filed June 1, 2004 have been fully considered but they are not persuasive.

a. The objections made to the drawings and specification have been withdrawn in response to the amendment. The proposed drawings correction has been approved by the examiner.

b. The rejections under 35 U.S.C. 112, second paragraph have been withdrawn in response to the amendment.

c. The applicant argues that the combination of Seroussi and Wu does not teach pairwise comparison to select a coding method. The examiner disagrees. Seroussi teaches pairwise comparison (column 7, lines 10-60 and figure 3). Seroussi also teaches providing a classification of the image type and code accordingly, in the Experimental Results section in column 18, where compound images are clearly provided by Seroussi, and the first full paragraph in the Detailed Description in column 6, for explicit recitation of condition coding.

d. In view of the applicant's arguments, rejection for claims 5, 6, and 7 has been withdrawn.

2. Claims 1-4 and 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Seroussi et al., 5,835,034, in view of Wu et al., 5,903,676.

The arguments advanced in paragraph 1 above as to the applicability of the reference have been incorporated herein.

For claim 1, a method for compression of compound images, the method comprising: a) determining a classification for a current pixel based upon pairwise comparisons of its causal neighbors; b) coding the pixel using

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conditional coding determined by the classification, producing a symbol for the pixel is provided by Seroussi in at least c. 7, lines 10-60, the third full paragraph in c. 10, the second full paragraph in c. 11, the paragraph bridging cols. 12-13, the last full paragraph in c. 20, where it is clear that the surrounding pixels (specifically, the causal neighbors) provide a classification of the image type and code accordingly, in the Experimental Results section in c. 18, where compound images are clearly provided by Seroussi, and the first full paragraph in the Detailed Description in c. 6, for explicit recitation of condition coding; and c) mapping the symbol to an output bit stream is clearly provided by Seroussi by the mapping table, Table 1 in the paragraph bridging cols. 11-12, which is also mapped as an encoded value in the first full paragraph in c. 7 and as noted in c. 14, lines 18-35. A classification mode is considered obvious over Seroussi as argued above, but Seroussi does not explicitly provide for a "mode" for classifying. Wu explicitly provide for a classification mode in at least the abstract, and can be used with the classification of pixels of Seroussi. It would've been obvious to one having ordinary skill in the art at the time the invention was made to use a classification mode, since this provides for an adaptive compression system that adapts to image content of all types thus providing for at least improved coding efficiency as well as simple logic.

For claim 2, the method of claim 1, wherein determining the classification for a current pixel further comprises: a) obtaining a number of distinct values for the causal neighbors by no more than four logical comparisons; and b) determining the classification according to the number of distinct values

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appearing in the causal neighbors is provided by Seroussi in at least the third full paragraph in c. 10 and the paragraph bridging cols. 12-13 for example, where only three comparisons are made, of which comparisons provide for a classification in accordance with the values determined.

For claim 3, the method of claim 1, wherein the classification of the current pixel is class 0, and the method further comprises: a) determining whether the current pixel is equal to its causal neighbors; b) if the current pixel is equal to its causal neighbors, encoding a "Yes" symbol by conditional coding is considered provided by Seroussi in at least the paragraph bridging cols. 12-13, where Seroussi explicitly teaches the possibility of all neighboring pixels equaling each other, which clearly corresponds to a specific classification of the image, and if this is the case, then a "Yes" is considered coded, since Applicant considered a "Yes" as a zero value (Applicant's specification on page 4, line 2, as Seroussi explicitly provides for a zero value also. And c) if the current pixel is not equal to its causal neighbors, encoding a "No" symbol by conditional coding and coding the pixel according to a continuous mode is considered provided by Seroussi where a "No" symbol, i.e. a one, is coded, which indicates that the neighboring pixels are no longer equal, and the pixel is coded in accordance with a continuous mode, since when neighboring pixels are not equal, this means that the image can be a continuous type of image and is a requirement for a continuous image, and is further corroborated by the first full paragraph in the Detailed Description in c. 6, where at least some of the image is a continuous type of image, and other types of image data is within the image as noted in the

Experimental Results starting in c. 18, line 15. Wu provides for at least two pixel classes.

For claim 4, see the rejection of at least claims 1 and 3 and the third full paragraph in c. 8, where "Yes" and "No" correspond to binary values, and symbols are explicitly provided for based on the causal neighbors including a minimum, maximum, and otherwise.

For claim 8, the method of claim 6, wherein coding of binary symbols is accomplished by an adaptive binary arithmetic coder is provided by Wu in at least the paragraph bridging cols. 12-13.

For claim 9, see the rejection of at least claim 1, and see at least c. 15, lines 25-39, and the fourth full paragraph in c. 23 for machine readable instructions.

3. Claims 5-7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be

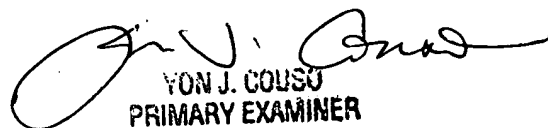
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calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Yon Couso whose telephone number is (703) 305-4779. The examiner can normally be reached on 8:30 am –5:00 pm from Monday to Friday

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached on (703) 308-5246. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800.



YON J. COUSO
PRIMARY EXAMINER

Yjc

July 30, 2004